CLAIMS

1. A folding table comprising:

a table top having a top surface and a bottom surface extending between a first end and a second end, the table top being divided at a plane transverse to the table top at a point located between the first end and the second end to form a first planar portion and a second planar portion, the table top configured to be selectively positionable between a working position and a storage position;

a first leg pivotally connected to the first planar portion;

a second leg pivotally connected to the second planar portion;

a first hinge assembly disposed between the first planar portion and the second planar portion, the first hinge assembly configured to selectively lock the table top in the working position, the first hinge assembly comprising:

a hinge pin disposed under the bottom surface of the table top and intersecting with the plane, the longitudinal axis of the hinge pin forming a hinge axis, wherein the table top is configured to fold about the hinge axis;

a first hinge connector having a first end connected to the first planar portion and a second end pivotally disposed about the hinge pin, the first hinge connector including a cam portion on the second end;

a second hinge connecter having a first end connected to the second planar portion and a second end pivotally disposed about the hinge pin, the second hinge connector including a locking slot;

a locking pin adapted to be disposed in the locking slot of the second hinge connector, the locking pin being selectively moveable

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within the locking slot between a locked position wherein the locking pin is positioned so that the cam portion of the first hinge connector abuts the locking pin so as to substantially prevent the first hinge connector from rotatable movement about the hinge axis, and an unlocked position wherein the first hinge connector is able to freely rotate about the hinge axis.

2. The folding table recited in claim 1, further comprising a lock actuating mechanism pivotally disposed about the hinge pin, the lock actuating mechanism comprising:

a handle portion; and

a displacement slot disposed at an offset angle with respect to the locking slot and configured to receive the locking pin so that when the handle is moved between a first position to a second position, the offset angle of the displacement slot acts to slide the locking pin in the locking slot between the locked and the unlocked position.

3. The folding table as recited in claim 2, further comprising:

a first support brace having a first end coupled to the first leg and a second end coupled to the first hinge assembly; and

a second support brace having a first end coupled to the second leg and a second end coupled to the first hinge assembly.

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4. The folding table as recited in claim 3, wherein the lock actuating mechanism further comprises an anchoring portion configured to maintain the handle in the first and second positions, the anchoring portion comprising an elongate member having a first groove and a second groove, wherein in the first position, the first groove is configured to engage a portion of one of the first support brace and the second support brace and in the second position, the second groove is configured to engage a portion of one of the first support brace and the second support brace.

5. The folding table as recited in claim 1, comprising a second hinge assembly disposed between the first planar portion and the second planar portion.

6. The folding table as recited in claim 5, wherein the hinge pin for the first hinge assembly and the second hinge assembly is the same structure.

7. The folding table as recited in claim 1, further comprising a first and second spaced apart side rail connected to the bottom surface of the first planar portion and a third and fourth spaced apart side rail connected to the bottom surface of the second planar portion, wherein the first hinge connector is connected to the first siderail of the first planar portion and the second hinge connector is connected to the third siderail of the second planar portion.

8. The folding table as recited in claim 7, wherein the first, second, third and fourth side rails are separate members rigidly attached to the first and second planar portions.

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9. The folding table as recited in claim 7, wherein the first leg is pivotally connected to the first and second side rail and the second leg is pivotally connected to the third and fourth side rail.

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10. A folding table comprising:

a table top having a top surface and a bottom surface extending between a first end and a second end, the table top comprising a first planar portion and a second planar portion;

a first leg pivotally connected to the first planar portion;

a second leg pivotally connected to the second planar portion;

a hinge pin disposed under the bottom surface of the table top, the longitudinal axis of the hinge pin forming a hinge axis, wherein the table top is configured to selectively fold about the hinge axis between a working position and a storage position;

a first hinge connector having a first end connected to the first planar portion and a second end pivotally disposed about the hinge pin;

a second hinge connecter having a first end connected to the second planar portion and a second end pivotally disposed about the hinge pin; and

a locking mechanism configured to selectively lock the table top in the working position, the locking mechanism comprising:

a cam portion formed on the second end of one of the first hinge connector and the second hinge connector;

a locking slot formed on the other of the first hinge connector and the second hinge connector that does not have the cam portion; and

a locking pin adapted to be disposed in the locking slot and selectively moveable between a locked position wherein the locking pin is positioned so that the cam portion abuts the locking pin so as to substantially prevent at least one of the first hinge connector and second

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hinge connector from rotatable movement about the hinge axis, and an unlocked position wherein at least one of the first hinge connector and second hinge connector is able to freely rotate about the hinge axis.

11. The folding table recited in claim 10, further comprising a lock actuating mechanism pivotally disposed about the hinge pin, the lock actuating mechanism comprising:

a handle portion; and

a displacement slot disposed at an offset angle with respect to the locking slot and configured to receive the locking pin so that when the handle is moved between a first position to a second position, the offset angle of the displacement slot acts to slide the locking pin in the locking slot between the locked and the unlocked position.

12. The folding table as recited in claim 11, further comprising:

a first support brace having a first end coupled to the first leg and a second end coupled to one of the first hinge connector and the second hinge connector; and

a second support brace having a first end coupled to the second leg and a second end coupled to one of the other of the first hinge connector and the second hinge connector which is not connected to the first support brace.

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13. The folding table as recited in claim 12, wherein the lock actuating mechanism further comprises an anchoring portion configured to maintain the handle in the first and second positions, the anchoring portion comprising an elongate member having a first groove and a second groove, wherein in the first position, the first groove is configured to engage a portion of one of the first support brace and the second support brace and in the second position, the second groove is configured to engage a portion of one of the first support brace and the second support brace.

14. The folding table as recited in claim 10, comprising a second hinge assembly disposed between the first planar portion and the second planar portion.

15. The folding table as recited in claim 14, wherein the hinge pin for the first hinge assembly and the second hinge assembly is the same structure.

16. The folding table as recited in claim 10, further comprising a first and second spaced apart side rail connected to the bottom surface of the first planar portion and a third and fourth spaced apart side rail connected to the bottom surface of the second planar portion, wherein the first hinge connector is connected to the first siderail of the first planar portion and the second hinge connector is connected to the third siderail of the second planar portion.

17. The folding table as recited in claim 16, wherein the first, second, third and fourth side rails are separate members rigidly attached to the first and second planar portions.

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18. The folding table as recited in claim 16, wherein the first leg is pivotally connected to the first and second side rail and the second leg is pivotally connected to the third and fourth side rail.

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19. A folding table comprising:

a table top having a top surface and a bottom surface extending between a first end and a second end, the table top comprising a first planar portion and a second planar portion;

a first leg pivotally connected to the first planar portion;

a second leg pivotally connected to the second planar portion;

a hinge pin disposed under the bottom surface of the table top, the longitudinal axis of the hinge pin forming a hinge axis, wherein the table top is configured to selectively fold about the hinge axis between a working position and a storage position;

a first hinge connector having a first end connected to the first planar portion and a second end pivotally disposed about the hinge pin;

a second hinge connecter having a first end connected to the second planar portion and a second end pivotally disposed about the hinge pin;

a first support brace having a first end coupled to the first leg and a second end coupled to the first hinge connector;

a second support brace having a first end coupled to the second leg and a second end coupled to the second hinge connector;

a locking mechanism configured to selectively lock the table top in the working position, the locking mechanism comprising:

a cam portion formed on the second end of the first hinge connector;

a locking slot formed on the second hinge connector; and

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a locking pin adapted to be disposed in the locking slot and selectively moveable between a locked position wherein the locking pin is positioned so that the cam portion abuts the locking pin so as to substantially prevent at least one of the first hinge connector from rotatable movement about the hinge axis, and an unlocked position wherein the first hinge connector is able to freely rotate about the hinge axis.

20. The folding table recited in claim 19, further comprising a lock actuating mechanism pivotally disposed about the hinge pin, the lock actuating mechanism comprising:

a handle portion;

a displacement slot disposed at an offset angle with respect to the locking slot and configured to receive the locking pin so that when the handle is moved between a first position to a second position, the offset angle of the displacement slot acts to slide the locking pin in the locking slot between the locked and the unlocked position; and

an anchoring portion comprising an elongate member having a first groove and a second groove, wherein when the handle is in the first position, the first groove is configured to engage a portion of the second support brace and in the second position, the second groove is configured to engage a portion of the second support brace.

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